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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/723,827 | 11/26/2003 | Michael A. Kropp | 57987US002 | 9277 |

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| EXAMINER |
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BERMAN, SUSAN W

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| ART UNIT | PAPER NUMBER |
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1711

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/723,827

Applicant(s)

KROPP ET AL.

Examiner

Susan W. Berman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>8/04, 11/04, 5/05</u> . | 6) <input type="checkbox"/> Other: ____ |

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear how an encapsulated "polymer-bound" base, as set forth in claim 1, can be an inorganic particle bonded to a base, as in claim 9, and be polymeric since an inorganic particle is not a polymeric particle? See paragraphs [0053] and [0054].

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 8-10, 13-15, 18, 20 and 22 are rejected under 35 U.S.C. 102(a) as being anticipated by EP 1 348 742 A2. EP '742 discloses coating powders comprising epoxy compounds and encapsulated catalysts such as polyamines or as substituted imidazoles [0040] and [0046]. EP '742 teaches that a catalyst coated with or encapsulated in a polymeric material physically isolates the catalyst from the film-forming material, thus improving processability and storage stability [0035]. See Tables 1-3. EP '742 does not mention a cationic photoinitiator; however, phosphonium salt compounds and onium-tetrasubstituted organoborate salts are taught as being suitable catalysts to be added to accelerate curing [0020]. Such onium salt compounds are known in the art as being photoinitiators as well as thermal catalysts, i.e. they

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can be activated by light or heat. Thus EP '742 discloses compositions comprising components corresponding to a, b and c in the instant claims.

Claims 1-5, 8-10, 13-15, 18, 20 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated Spera et al [US 2003/0194560 which is equivalent to EP 1 348 742 A2]. Spera et al disclose coating powders comprising epoxy compounds and encapsulated catalysts such polyamines or as substituted imidazoles [0037] and [0048]. Spera et al teach that a catalyst coated with or encapsulated in a polymeric material physically isolates the catalyst from the film-forming material, thus improving processability and storage stability [0037]. See Tables 1-3. Spera et al do not mention a cationic photoinitiator; however, phosphonium salt compounds and onium-tetrasubstituted organoborate salts are taught as being suitable catalysts to be added to accelerate curing [0020]. Such onium salt compounds are known in the art as being photoinitiators as well as thermal catalysts, i.e. they can be activated by light or heat. Thus Spera et al disclose compositions comprising components corresponding to a, b and c in the instant claims.

Claim Rejections – 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11, 12, 16, 19,21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 1 348 742 or Spera et al, as applied to claims 1-5, 8-10, 13-15, 18, 20 and 22 above, and further in view of Hoffman et al (6,224,793). The disclosure of EP '742 or Spera et al is discussed above. Hoffman et al disclose an active agent encapsulated in a crystallizable or thermoplastic polymer that is designed to release the active agent at a desired temperature. The active agent is preferably an organometallic or

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organic catalyst including curing accelerators for epoxy resin compositions (column 4, lines 11-20, and column 5, lines 28-50). A side chain crystallizable polymeric encapsulating agent is described in column 6, line 62, to column 9, line 34. A preferred embodiment is a shell of crystalline polymer about a mixture of polymer having dispersed therein an active agent (column 10, lines 57-66). The advantages of the encapsulated active agents are taught in column 3, lines 49-58.

It would have been obvious to one skilled in the art at the time of the invention to employ the active agent encapsulated in a crystallizable or thermoplastic polymer disclosed by Hoffman et al as the encapsulated catalyst in the analogous epoxy compositions taught by EP '742 or Spera et al. EP '742 or Spera et al provide(s) motivation by teaching encapsulated catalysts comprising imidazoles or amines. Hoffman et al also disclose encapsulated imidazoles or amines. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of providing active agents encapsulated and thus stable at ambient temperatures but exhibiting rapid reactivity upon release, as taught by Hoffman et al. Hoffman et al provide additional motivation by teaching that the presence of the encapsulating agent does not deteriorate the adhesive or elastomer properties of the cured composition.

Claims 6, 7 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 1 348 742 or Spera et al, as applied to claims 1-5, 8-10, 13-15, 18, 20 and 22 above, and further in view of Lamon et al (6,565,969). The disclosure of EP '742 or Spera et al is discussed above. Lamon et al disclose an adhesive article comprising a bondable layer wherein the bondable layer comprises an epoxy compound. The disclosed curatives for thermosetting material include encapsulated or polymer bound amines and cationic photocatalysts. Lamon et al teach using two or more of the disclosed curatives in combination. See column 8, column 13, line 9, to column 14, line 45, and Example 5.

It would have been obvious to one skilled in the art at the time of the invention to select a combination of nitrogen containing curatives such as encapsulated amines or polymer-bound amines or

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imidazoles and photochemically activated curatives, such as an onium salt or organometallic salt, from the curatives taught by Lamon et al because Lamon et al teach that the disclosed curatives can be used in combination. It would have been obvious to one skilled in the art at the time of the invention to employ such a combination taught by Lamon et al in the analogous epoxy compositions taught by EP '742 or Spera et al. The reason is that EP '742 teaches using encapsulated or polymer-bound amines and imidazoles for curing epoxy compositions and Lamon et al teach that photochemically activated curatives can be used in combination with the nitrogen-containing curatives. One of ordinary skill in the art at the time of invention would have been motivated by a reasonable expectation of providing a composition curable by thermal and radiation means. With respect to claim 24, it would have been obvious to one skilled in the art at the time of the invention to cure the composition suggested by combination of the teachings of Lamon et al with EP '742 or Spera et al by irradiation to activate the photochemically activated curative and also by activation, such as by heating, the encapsulated polymer bound catalyst.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over EP 1 348 742 or Spera et al in view of Hoffman et al, as applied to claims 1-5, 8-16, 18, 20 and 18-23 above, and further in view of Lamon et al (6,565,969). See the discussion of the references set forth above. It would have been obvious to one skilled in the art at the time of the invention to select a combination of nitrogen containing curatives such as encapsulated amines or polymer-bound amines or imidazoles and photochemically activated curatives, such as an onium salt or organometallic salt, from the curatives taught by Lamon et al because Lamon et al teach that the disclosed curatives can be used in combination. It would have been obvious to one skilled in the art at the time of the invention to employ such a combination taught by Lamon et al in the analogous epoxy compositions taught by EP '742 in combination with Hoffman et al. The reason is that EP '742 and Hoffman et al each teach using encapsulated or polymer-bound amines and imidazoles for curing epoxy compositions and Lamon et al teach that photochemically activated

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curatives can be used in combination with the nitrogen-containing curatives. One of ordinary skill in the art at the time of invention would have been motivated by a reasonable expectation of providing a composition curable by thermal and radiation means.

Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wanthal et al (6,060,540) disclose modeling pastes comprising epoxy resins, an elastomer, and a latent material such as a catalyst in combination with a SCC polymer, such as Intelimer 7002 products (column 4, line 34, to column 5, line 44). Bitler et al (6,255,367) disclose polymeric modifying agents containing an SCC polymer and an active chemical ingredient, such as an amine (column 12, line 52, to column 13, line 49). The composition can comprise epoxy materials (column 19, Table 5).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W. Berman whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Susan W Berman
Primary Examiner
Art Unit 1711

SB
6/20/05